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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,354	06/04/2007	Joachim Gebhardt	64,958A	9490
25212	7590	05/08/2009	EXAMINER	
DOW AGROSCIENCES LLC 9330 ZIONSVILLE RD INDIANAPOLIS, IN 46268				CHANDRAKUMAR, NIZAL S
ART UNIT		PAPER NUMBER		
1625				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/584,354	GEBHARDT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	NIZAL S. CHANDRAKUMAR	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 23 February 2009.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-8 is/are pending in the application.

4a) Of the above claim(s) 5-7 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-4, 8 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 08/15/2006.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_ .

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

Claims 1-4 and 8 are pending.

Applicant's election with traverse of Group I Claims 1-4 and claim 8 in the reply filed on 02/23/2009 is acknowledged. Claims 5-7 corresponding to the non-elected groups are withdrawn by the applicant and they are no longer present in the claim list. Notwithstanding, applicant traverses the restriction on the grounds that the intermediates of Group 2 and 3 (that is compounds of the claims 5-7) are necessary to practice the process of Group I. This is not found persuasive because for reasons of record. The rejoinder provision available to Applicant was stated in the restriction requirement on page 4.

The requirement is still deemed proper and is therefore made FINAL.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(l).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 and depended claims 2-4 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 1, line 13; it is unclear what the term 'than' means. This term is also found in other instances in the specification. The intended use appears to mean 'then'. Likewise, last line of claim 1, page 4 'und' should be 'and'. Likewise the term 'zeolithe' appear to mean 'zeolite'. Claim 1, numbered page 5, Formula (IIla2) picturing Emmons reagent does not have a counter-ion.

Appropriate corrections are expected.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 2 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for making pyridines of formula (I) wherein R3 is electron withdrawing fluorinated alkyl group does not enable for making compounds multiple other possibilities for R3 group. Thus enabling disclosure is found for making compounds wherein R3 is trifluoromethyl. Enabling disclosure is not found for

making compounds wherein R3 is CN or NO<sub>2</sub> (see below) The determination that "undue experimentation" would have been needed to make and use the claimed invention is not a single, simple factual determination. Rather, it is a conclusion reached by weighing all the relevant factual considerations.

Enablement is considered in view of the Wands factors (MPEP 2164.01 (a)). These include: (1) breadth of the claims; (2) nature of the invention; (3) state of the prior art; (4) amount of direction provided by the inventor; (5) the level of predictability in the art; (6) the existence of working examples; (7) quantity of experimentation needed to make or use the invention based on the content of the disclosure; and (8) relative skill in the art.

All of the above mentioned Wands factors have been considered with the most relevant factors discussed below:

The preparation of pyridines wherein the electron withdrawing group R3 is CN or NO<sub>2</sub> requires corresponding starting material (II) (shown on page (5) line 2 of the instant claim). The specification discloses the formula of on page 4, line 17. It is not seen where direction, guidance or working example is found in the specification for making such compounds. According to the U.S. Court of Customs and Patent Appeals in *In re Argoudelis, De Boer, Eble, and Herr* 168 USPQ 99 at 101, "[o]rdinarily no problem in this regard arises since the method of preparing almost all starting materials can be set forth in writing if the materials are not already known and available to the workers in the art, and when this is done the specification is enabling to the public". *In re Argoudelis, De Boer, Eble, and Herr* 168 USPQ 99 at 104, "it is essential that there

be no question that, *at the time an application for patent is filed*, (emphasis in original) the invention claimed therein is fully capable of being reduced to practice (i.e., that no technological problems, the resolution of which would require more than ordinary skill and reasonable time, remain in order to obtain an operative, useful embodiment)." That is not the situation here. Rather we find no direction as to how the many required starting materials of formula (IIa) are obtained. A structure search for compounds in the Chemical Abstracts for this formula predicts no citations. The application is intended to be novel, however without enabling disclosure or prior art citations of how to make this starting material, undue experiment would be necessary to make such acylcyanides or acynitro compounds. The complicating factor is the presence of the alpha, beta-unsaturation and the leaving group which are required to make Applicants compounds. *In re Howarth*, 210 USPQ 689, (claimed derivatives of clavulanic acid not enabled by specification lacking information of how prepare the clavulanic acid or directions to reference materials containing such information), *Ex parte Schwarze* 151 USPQ 426 (where starting material is not known to art as of date of filing application, there must be included a description of preparation thereof to enable one skilled in this art to carry out applicant's invention), *Ex parte Moersch* 104 USPQ 122 (claims to process for the production of (1)-y1-p-nitrophenyl-2-dichloracetamido-propane-1,3-diol not enabled because of failure to describe source or method of obtaining starting compound; although starting compound is identified by means of appropriate name and by structural formula).

Acylcyanides without alpha, beta-unsaturation and the leaving group positioned as in the formula (IIa) are well known. Such compounds have been used for making carbon-acylation. In the instant case, one skilled in the art would anticipate that such an initial acylation would stop further progress of the reaction.

Deleting CN and NO<sub>2</sub> as possibilities for R<sub>3</sub> would overcome this rejection.

#### ***Double Patenting***

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 8 rejected under 35 U.S.C. 101 as claiming the same invention as that of claim1 of prior U.S. Patent No. 7488828. The issued patent and the instant claim are drawn to same compound pictured in two tautomeric forms. This is a double patenting rejection.

#### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims

are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4, 8 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 7488828 in view of Gupton et al. (WO 02/30901 A1). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of both the application are drawn to the process of preparation of pyridine compounds using similar starting materials and similar reagents in two key steps. Thus in the first step one, a Wittig Horner reagent (issued patent) or a Wittig and/or Wittig Horner reagent (instant claim) is used to make identical intermediates. While the Wittig reagent is anticipated to give predominantly cis product and the Horner reagent predominately trans product, these are of no consequence in the instant process. Though in the instant claims a slightly different reagent is also indicated, the intermediates formed are same in both the cases. Such intermediates are taught by Gupton et al. to make the pyridines using reagents claimed in the instant case and the issued patent. As such it would have been obvious

to one of ordinary skill in the art to modify an otherwise known process using analogous reagents known in the art as the results would not have been unexpected.

**Objections:**

Specification: The specification is generally narrative and indefinite, and appears to be a literal translation into English from a foreign document and is replete with typographical, grammatical and technical errors. It is difficult to understand the full scope and limitations of the invention. Some examples of the issues are shown below:

Typographical and language Issues:

Page 1 line 17 pyridin

line 18, the

line 21 what is a -M and or a -I- effect? Skilled artisan would understand inductive withdrawal of electrons or withdrawal of electrons by shifting of electrons (delocalization); the disclosure attempts to define electron withdrawing function of the substituents when chemical structures or names can be used to describe the substituents more clearly.

line 41, which sulfur is 'bond' directly to the pyridine ring; further what is thiolate? Thiolate could have the meaning of negatively charged S (akin to carboxylate, carbonate etc.).

Technical issues:

Page 3, lines 25, 32: It is not clear what applicant means by Wittig or Horner precursors. In either the case the possibility E = S-S is technically difficult to understand. No examples of such compounds are described in the prior art or in the specification. If such a reagent is 'novel', one skilled in the art would anticipate fragmentation of the S-S bond on deprotonation which is required for olefination. Likewise, Page 8, lines 20 and the structure of the intermediates shown in lines between 26 and 29. At least in the case of the reaction in which Wittig reagents are used, the skilled artisan would not expect the formation of intermediates IV-3 and IV-4 (for mechanistic reasons or at least because of the absence of additional OR1 species in the reaction mixture to make IV-3).

Claims: In the amended claims filed 02/23/2009, new claim 8 is inserted on page 2 (first page of the claim list) as well as at the end of the claim list on page 6. Withdrawn claims 5-6 are present two times in the front and in the end.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIZAL S. CHANDRAKUMAR whose telephone number is (571)272-6202. The examiner can normally be reached on 8.30 AM - 4.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571 0272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nizal S. Chandrakumar

/D. Margaret Seaman/

Primary Examiner, Art Unit 1625